

BRITISH STANDARD

Gauge blocks manufactured to imperial specification – Part 1: Specification and validation

ICS 17.040.30



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Published by BSI Standards Limited 2015

ISBN 978 0 580 89137 3

The follow BSI references relate to the work on this standard:
Committee reference TDW/4
Draft for comment 03/101273 DC

Publication history

First published July 1977

Second edition, April 1993

First published as BS 4311 (combined revision of Parts 1 and 3) August 2007

Renumbered as BS 4311-1, February 2009

Amendments issued since publication

Amd. no.	Date	Text affected
Corr. 1	February 2009	Renumbered from BS 4311:2007 to BS 4311-1:2007. Publication information and foreword updated.
Corr. 2	February 2015	See foreword

Contents

Foreword *ii*

1	Scope	<i>1</i>
2	Normative references	<i>1</i>
3	Definitions	<i>1</i>
4	Nomenclature of faces	<i>2</i>
5	Basis of measurement, traceability, reference condition	<i>2</i>
6	General dimensions, material properties, marking	<i>3</i>
7	Metrological requirements	<i>4</i>
8	Calibration of gauge blocks	<i>7</i>

Annexes

Annex A (informative)	Frequency of calibration	<i>8</i>
Annex B (informative)	Care of gauge blocks	<i>8</i>
Annex C (informative)	Wear in use and maintenance of gauge blocks	<i>9</i>
Annex D (informative)	Selecting grade of gauge blocks	<i>10</i>

List of figures

Figure 1	– Nomenclature of faces	<i>2</i>
Figure 2	– Perpendicularity deviation of side faces with a measuring face as a datum	<i>6</i>

List of tables

Table 1	– Cross-section	<i>3</i>
Table 2	– Dimensional stability	<i>4</i>
Table 3	– Flatness tolerances for new inch gauge blocks	<i>5</i>
Table 4	– Perpendicularity tolerance	<i>6</i>
Table 5	– Limit deviation, l_e of the length at any point of the measuring face from nominal length and tolerance, for the variation in length	<i>7</i>

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iii, a blank page, pages 1 to 11 and a back cover.

Foreword

Publishing information

This part of BS 4311 is published by BSI Standards Limited, under licence from The British Standards Institution and came into effect on 31 August 2007. It was prepared by Technical Committee TDW/4, *Technical product specification – Methodology, presentation and verification* under the direction of the Consumer products and services business sector. TDW/4 has, within its scope, responsibility for “metrology and precision measurement” with resulting access to appropriate technical expertise. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This part of BS 4311 supersedes BS 4311-1:1993 and BS 4311-3:1993, which are withdrawn.

Information about this document

Text introduced or altered by Corrigenda No. 1 and No. 2 are indicated in the text by tags **[C1]** **[C1]** and **[C2]** **[C2]**. Minor editorial corrections are not tagged.

This new version of BS 4311-1 has been prepared in response to a requirement for the ongoing support for gauge blocks manufactured to the imperial system, following the publication of BS EN ISO 3650:1999, which provides for gauge blocks manufactured to the metric system, and the consequent withdrawal of BS 4311-3:1993.

Throughout this revision, the principles and practices specified in BS EN ISO 3650:1999 have been given precedence and have been cross-referenced wherever appropriate. The main function of this new version of BS 4311-1 is to provide for the application of the requirements of BS EN ISO 3650:1999 to the many gauge blocks manufactured to the imperial system, which remain in use and which will continue to be in use for the foreseeable future.

The effects of uncertainty of measurement continue to be taken into account in that the method of measurement is clearly stated for each grade and the line of traceability to internationally recognized, universal standards of length is established.

[C1] Additionally, BS 4311-2 is being reissued in order to specify requirements for accessories for use with gauge blocks in both metric and inch units. **[C1]**

As with BS EN ISO 3650:1999, and unlike the former BS 4311-1:1993 and BS 4311-3:1993, this standard does not make any distinction between new and used gauge blocks. However, the fact that during use gauge blocks wear and consequently fall outside their original specification is still recognized. To preserve the required standards of accuracy during use, gauge blocks should be carefully maintained and regularly calibrated. Guidance on these aspects is provided in Annex A, Annex B, Annex C and Annex D. Because of their inclusion in this standard, the contents of these annexes relate specifically to gauge blocks manufactured to the imperial system, but it should be recognized that the principles and recommendations presented here, apply equally to gauge blocks manufactured to the metric system.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

A comma, rather than a full point, has been used as the decimal indicator throughout this British Standard in order to align it with the Geometrical Product Specifications listed in Clause 2. Care should be taken when using this publication in conjunction with other British Standards.

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This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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